LISTING OF CLAIMS

1. (original) A method of providing a breathing gas comprising the steps of:

sensing a carbon-dioxide level associated with a patient breathing interface;

determining if the level of carbon-dioxide is increasing or decreasing;

if the level is decreasing, determining if the level of carbon-dioxide has crossed a threshold parameter;

if the carbon-dioxide level has crossed the threshold parameter, increasing the breathing gas pressure provided to the patient breathing interface;

decreasing the breathing gas pressure provided to the patient breathing interface after a predetermined period of time; and

the increasing and decreasing of breathing gas pressure maintaining a positive pressure sufficient to sustain open the airway of a patient wearing the breathing interface.

2. (original) The method of claim 1 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises sensing the carbon-dioxide level using infrared light.

3. (original) The method of claim 1 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises emitting infrared light within the patient breathing interface.

4. (original) The method of claim 3 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises detecting infrared light within the patient breathing interface.

5. (original) The method of claim 3 wherein the step of emitting comprising emitting infrared light into a fiber optic cable connected to the patient breathing interface.

6. (original) The method of claim 4 wherein the step of detecting infrared light comprising sensing the infrared light in a fiber optic cable coupled to the patient breathing interface.

7. (original) The method of claim 1 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises sensing the carbon-dioxide level vented from the patient breathing interface.

8. (original) The method of claim 1 further comprising the step of initiating a monostable timer if the carbon-dioxide level has crossed the threshold parameter.

9. (original) The method of claim 8 wherein the step of decreasing the breathing gas pressure provided to the patient breathing interface after a predetermined period of time comprises decreasing the breathing gas pressure upon expiration of the monostable timer.

10. (original) A method of providing a breathing gas to a patient comprising the steps of:

sensing a carbon-dioxide level associated with a patient breathing interface;

determining if the sensed level of carbon-dioxide is increasing or decreasing;

if the sensed carbon-dioxide level is increasing, determining if the sensed carbon-dioxide level has crossed a first threshold parameter;

if the sensed carbon-dioxide level has crossed the first threshold parameter, decreasing the breathing gas pressure provided to the patient breathing interface;

if the sensed carbon-dioxide level is decreasing, determining if the sensed carbon-dioxide level has crossed a second threshold parameter;

if the sensed carbon-dioxide level has crossed the second threshold parameter, increasing the breathing gas pressure provided to the patient breathing interface; and

the increasing and decreasing of breathing gas pressure maintaining a positive pressure sufficient to sustain open the airway of a patient wearing the breathing interface.

11. (original) The method of claim 10 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises sensing the carbon-dioxide level using infrared light.

12. (original) The method of claim 10 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises emitting infrared light within the patient breathing interface.

13. (original) The method of claim 12 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises detecting infrared light within the patient breathing interface.

14. (original) The method of claim 12 wherein the step of emitting comprising emitting infrared light into a fiber optic cable coupled to the patient breathing interface.

15. (original) The method of claim 14 wherein the step of detecting infrared light comprising sensing the infrared light in a fiber optic cable coupled to the patient breathing interface

16. (original) The method of claim 10 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises sensing the carbon-dioxide level vented from the patient breathing interface.

17. (original) A method of providing a breathing gas to a patient comprising the steps of:

sensing a carbon-dioxide level associated with a patient breathing interface;

determining if the sensed level of carbon-dioxide is increasing or decreasing;

if the sensed level of carbon-dioxide is decreasing, determining whether the sensed level of carbon-dioxide at or below a threshold level;

if the sensed level of carbon-dioxide is at or below the threshold level, increasing the pressure of the breathing gas for a fixed period of time;

decreasing the pressure of the breathing gas upon expiration of the fixed period of time;

the increasing and decreasing of the pressure of the breathing gas maintaining a positive pressure sufficient to sustain open the airway of the patient.

18. (original) The method of claim 17 wherein the step of increasing the pressure of the breathing gas for a fixed period of time comprises initiating a monstable timer.

19. (original) The method of claim 17 wherein the step of sensing a carbon-dioxide level associated with a patient breathing interface comprises the step of sensing a carbon-dioxide level with infrared light.

20. (original) The method of claim 19 wherein the step of sensing a carbon-dioxide level with infrared light comprises the step of sensing a carbon-dioxide level vented from the patient breathing interface.

21. (original) A method of administering a CPAP therapy comprising the steps of:

monitoring the level of carbon-dioxide vented from a patient breathing interface;

if the level of carbon-dioxide vented is decreasing, determining of the level of carbon-dioxide is at or below a threshold value;

if the level of carbon-dioxide vented is at or below the threshold value, providing a first positive airway pressure to the patient breathing interface for a fixed period of time; and

upon the expiration of the fixed period of time providing a second positive airway pressure to the patient breathing interface.

22 (original) A system for administering a breathing gas to a patient breathing interface comprising;

(a) a blower for providing positive pressure breathing gas;

(b) a controller in circuit communication with the blower;

(c) an infrared light emitter and detector in circuit communication with the controller for detecting the level of carbon-dioxide associated with the patient breathing interface; and

(d) logic for increasing and decreasing the level of the positive pressure breathing gas based on the level of carbon-dioxide detected to maintain open the airway of a patient.

23. (original) The system of claim 22 wherein the logic for increasing and decreasing the level of the positive pressure breathing gas based on the level of carbon-dioxide associated with the patient breathing interface comprises logic for comparing the level of carbon-dioxide associated with the patient breathing interface to a threshold parameter.

24. (original) The system of claim 22 further comprising a monostable timer having a variable off time period and predetermined on time period.

25. (original) The system of claim 22 further comprising a optical fibers coupled to the infrared emitter and detector.

26. (original) The system of claim 22 wherein the infrared emitter and detector are located within a housing accommodating the controller.

27. (original) The system of claim 22 wherein the infrared emitter and detector are located within the patent breathing interface.

28. (original) The system of claim 22 wherein the infrared emitter and detector are located proximate to a vent of the patient breathing interface.